

**REMARKS**

This is in full reply to the Office Action mailed November 7, 2006. Reexamination and reconsideration are respectfully requested.

Applicant appreciates the Examiner's noted consideration of the Information Disclosure Statement filed October 3, 2006.

**Claims**

Claims 10 and 11 were rejected under 35 U.S.C. § 112, first paragraph, as being based on a disclosure which is not enabling. This rejection is traversed.

The "exhaustion limit value" and "frequency limit value" are described in Applicant's specification, at paragraphs 0123 and 0131, respectively. The functions of the exhaustion limit value (**kr0**) and the frequency limit value (**mf0**) are shown in Figs. 11-13, and suggested default values for these limits are provided in Fig. 15. Because there is clearly various and detailed descriptions regarding those features, Applicant submits that the specification enables one of ordinary skill in the art. *See In re Mayhew*, 527 F.2d 1229, 1234 (CCPA 1976). Accordingly, Applicant respectfully requests reconsideration and withdrawal of the rejection of claims 10 and 11 under 35 U.S.C. § 112, first paragraph.

Claim 15 was rejected under 35 U.S.C. § 101 as directed to non-statutory subject matter. This rejection is traversed.

The preamble of claim 15 has been amended so that this claim is currently drawn to "[a] computer program product stored on a computer-readable medium for making a computer execute a process." This claim defines a useful manufacture by identifying the physical structure of the manufacture in terms of its hardware and software combination and therefore defines a statutory product. *See MPEP 2106(IV)(B)(2)(a)*. Accordingly, Applicant respectfully requests reconsideration and withdrawal of the rejection of claim 15 under 35 U.S.C. § 101.

Claims 1-3, 5-6, and 12-15 were rejected under 35 U.S.C. § 102 as being anticipated by U.S. Pat. No. 6,295,409 to Ikeda (“Ikeda”). This rejection is traversed.

Ikeda teaches an apparatus for simultaneously recording two channels of video data onto a single optical disc. (Ikeda, Abstract). The apparatus of Ikeda apparently operates by utilizing two buffers which are constantly being filled by the video channels, and a recording head which can record data at over 2x the data rate of either video channel. The recording head alternates between recording the data from the first buffer and recording data from the second buffer, to separate locations on the optical disc. (Ikeda, 2:55-3:8). While Ikeda may describe a type of recording device, it fails to teach or suggest the features of Applicant’s invention.

With regard to Applicant’s claim 1, Ikeda fails to teach or suggest all of the features recited in Applicant’s claim. For example, Ikeda fails to teach or suggest “readout means for collectively reading out said data recorded on said information recording medium in units of a predetermined amount of data while the recording by said recording means is in progress.” In addition to simultaneously recording two tracks and simultaneously reading two tracks, Applicant’s invention also includes reading data from the medium (e.g., the low-resolution track) while recording is in progress. This claimed functionality is absent from the teachings of Ikeda. Ikeda merely teaches simultaneous recording of multiple tracks, (Ikeda, e.g. at 2:10-17), and the simultaneous reading of multiple tracks, (Ikeda, at 5:19-26). Therefore this claim 1 is patentable over Ikeda for at least this reason. Furthermore, claims 2, 3, 5, 6, and 12, which are dependent on claim 1 and incorporate all of the limitations therein, are also patentable over Ikeda for at least this reason.

Claims 13, 14, and 15 all contain a similar limitation as that discussed in claim 1:

*a readout step of collectively reading out said data recorded on the [said] information recording medium in units of a predetermined amount of data while the recording in said recording step is in progress*

For at least similar reasons to those discussed regarding claim 1, these three claims are also patentable over Ikeda.

Additionally, Ikeda fails to teach or suggest all of the features recited in Applicant's claim 2. For example, Ikeda fails to teach or suggest "said recording means substantially simultaneously records first data at a high bit rate and second data at a lower bit rate than that of said first data, both data corresponding to a same material, on said information recording medium." Throughout Ikeda, the plurality of video channels are described as being of the same bit rate (A). (Ikeda, e.g. at 3:21-23). Furthermore, the content of the video streams is never suggested anywhere in Ikeda.

The passages cited in the November 7 Office Action, (Ikeda, 2:17-44), do not suggest either of these features. These passages discuss the feature of Ikeda that the writing process occurs at twice (or more) the bit rate of the incoming video streams. In other words, each buffer is filled by an incoming video stream at bit rate A. In order to write two channels worth of data at bit rate A, the write head must write to the disc at a bit rate of at least 2\*A. (See Ikeda, at 3:29-46). However, nowhere is it suggested that the bit rate of the video data itself differs between these two channels. Also note, for example, Figs. 4A and 4B in Ikeda, depicting the status of two buffers. The respective slopes of these graphs are equal, representing equal data transfer rates into and out of the respective buffers. Therefore Applicant's claim 2 is patentable over Ikeda for at least this reason.

Accordingly, Applicant respectfully requests reconsideration and withdrawal of the rejection of claims 1-3, 5-6, and 12-15 35 U.S.C. § 102.

Claims 7-9 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Ikeda in view of U.S. Pat. No. 6,937,549 to Nozaki ("Nozaki"). This rejection is traversed.

Nozaki describes a system for managing table of contents ("TOC") information for a multi-session CD-R. (Nozaki, Abstract). According to Nozaki, an external nonvolatile memory is used to store the TOC information associated with a CD-R. (Nozaki, 7:25-29). The nonvolatile memory also stores a unique disc identifier ("disc ID") associated with this TOC information. (Nozaki, 7:25-29). When a CD-R is finalized, the recording device retrieves the proper TOC information (corresponding to the proper disc ID) from the nonvolatile memory and

records the retrieved TOC information to the CD-R. (Nozaki, 7:30-33). Nozaki, even viewed in combination with Ikeda, fails to teach or suggest all of the features recited in Applicant's claims.

For example, with regard to Applicant's claim 7, neither Nozaki nor Ikeda teach or suggest "verification means for verifying the recording on said information recording medium based on said data stored by said storage means." As described in Applicant's specification, for example at paragraphs 100-102, Applicant's invention may include a means for comparing the data that has been recorded onto the medium with the data that remains in the storage buffer. By comparing this data, Applicant's invention can verify the integrity of the data that has been recorded on the medium.

Nozaki does not teach any such verification means. Nozaki may teach reading some information (e.g., the disc ID) from the medium and using this information to *access* the TOC information stored in the nonvolatile memory. However, the data stored on the CD-R is never *verified* based on the stored TOC information. The cited passages (Nozaki, 11:8-14, 11:39-48) merely describe the TOC information being used to (1) record the TOC information to the disc; and (2) display the stored TOC information to a user when a disc is not present. Neither of these can reasonably be interpreted as verifying the information recorded on the CD-R (the information already stored on the CD-R is not accessed in either of these processes).

Therefore Applicant's claim 7 is patentable over this combination for at least these reasons. Furthermore, claims 8 and 9, which are dependent on claim 7 and incorporate all of the limitations therein, are also patentable over this combination of references for at least this reason.

Accordingly, Applicant respectfully requests reconsideration and withdrawal of the rejection of claims 7-9 under 35 U.S.C. § 103(a).

Claims 4 and 10 were rejected under 35 U.S.C. § 103(a) as unpatentable over Ikeda in view of U.S. Pat. App. 2003/0161233 of Sako et al. ("Sako"). This rejection is traversed.

Sako describes a system for recording data in multiple addressing formats on a single optical disc. (Sako, Abstract). This is achieved largely through specific data structures stored in

one of the data areas. (Sako, Figs. 2-5). Sako, even viewed in combination with Ikeda, fails to teach or suggest all of the features recited in Applicant's claims.

With regard to claim 4, it has been shown that Ikeda fails to teach or suggest the recording/reproducing device according to claim 1. For example, Ikeda fails to teach or suggest means for reading data from the recording medium while also recording data onto the medium. Sako also fails to teach or suggest this feature. Claim 4 is dependent on claim 1 and incorporates all of the limitations therein. Therefore claim 4 is patentable over this combination of references for at least this reason.

With regard to claim 10, neither Ikeda nor Sako teach or suggest "setting means for setting at least one of an exhaustion limit value parameter and a frequency limit value parameter of collective readout for said readout of said data by said readout means in accordance with a communication speed." In light of Applicant's specification, the exhaustion limit value and the frequency limit value cannot be interpreted as analogous to the focusing signals used to control the servo of Sako. As described in Applicant's specification, these limit values (**kr0** and **mf0**) are used, for example, to control the data readout process. (Applicant's specification, Fig. 13) Adjusting these values will affect the frequency of executing the "inner loop" of the readout process (i.e., steps **S32 – S38**), as shown in Figs. 13 and 15. The servo control signals of Sako, used merely to control the tracking of the laser across the disc surface, cannot reasonably be interpreted as suggesting these features. Therefore this claim is patentable over these references for at least this reason.

Accordingly, Applicant respectfully requests reconsideration and withdrawal of the rejection of claims 4 and 10 under 35 U.S.C. § 103(a).

Claim 11 was rejected under 35 U.S.C. § 103(a) as unpatentable over Ikeda, in view of Sako, and in further view of U.S. Pat. No. 5,995,704 to Shido ("Shido"). This rejection is traversed.

Shido describes a method for recording data on a medium using a hierarchical representation of the data at several resolutions. (Shido, 5:45-6:54, and Figs. 6A, 6B, 7). This allows a user to read back the data at different resolutions, depending on the available time for a reading operation. (Shido, 3:1-4). Shido, even viewed in combination with Ikeda and Sako, fails to teach or suggest all of the features of Applicant's claim.

For example, none of these references teach or suggest "selection means for allowing a user to arbitrarily select at least one of an exhaustion limit value parameter and a frequency limit value parameter of collective readout for said readout of said data by said readout means." Shido may teach a means for a user to input some type of control value. However, neither the control values in Shido nor the control values in Sako can reasonably be said to suggest the claimed exhaustion and frequency limit values. The user-input control values described in Shido merely control the desired output resolution of the read-out information. (Shido, 7:14-23, 8:26-29). This is not analogous to the claimed limit values whose functionality is described in Applicant's specification. Therefore this claim is patentable over this combination of references for at least this reason.

Accordingly, Applicant respectfully requests reconsideration and withdrawal of the rejection of claim 11 under 35 U.S.C. § 103(a).

In view of the above amendment, applicant believes the application is in condition for allowance.

Applicant believes no fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 18-0013, under Order No. SON-2968 from which the undersigned is authorized to draw.

Dated: April 5, 2007

Respectfully submitted,  
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